

OTHER MONITORING CAPABILITIES

Nonpoint Source Monitoring –

Nonpoint source (NPS) monitoring is used to measure the impact of pollutants from sources other than wastewater discharges. These other sources would include stormwater runoff, atmospheric deposition and boat wastes. Stormwater runoff can result in significant impacts to the quality of surface waters. For that reason, Water Monitoring and Standards has been involved in monitoring of stormwater and associated nonpoint sources of pollution since 1994.

Stormwater monitoring is performed for two primary purposes; 1) to measure the loads (quantities) of certain pollutants carried in stormwater, and 2) to identify the actual sources of the pollutants so that corrective actions can be taken to reduce the impact of the source or to eliminate it. Currently, Water Monitoring and Standards is involved in both types of NPS monitoring that are described below.

Determination of Total Annual Nonpoint Source Pollution Loads to Watershed Management Areas 17, 18, & 20 (Lower Delaware)

The Lower Delaware Watershed Nonpoint Source monitoring study is a multi-year surface water quality investigation. It is being conducted by both the Department of Environmental Protection and the U.S. Geological Survey. Its purpose is to estimate the NPS loads of nutrients, bacteria, and suspended solids from various land use areas in Watershed Management Areas (WMA) 17, 18 & 20 (Lower Delaware).

The primary study objectives are:

1. Document current water quality before NPS and stormwater management strategies are initiated, and
2. Develop a water quality model to estimate unit NPS loads of selected constituents associated with different land uses in WMA 17, 18, & 20.

In addition, synoptic sampling will be conducted during storm runoff conditions near the beginning of the baseline characterization phase of the study to verify the modeled land-use to water quality relationships, to identify any anomalies to these relationships in the watersheds being studied, and to identify the major nonpoint sources, thereby allowing for a more focused implementation of Best Management Practices (BMPs).

Cape May County NPS Pollution Source Study

Bay waters in the vicinity of Wildwood, NJ have had degraded water quality for over 30 years. This situation has resulted in restrictions to shellfish harvesting and impacts to bathing areas in these waters. In 2003-2004, the Bureau of Marine Water Monitoring will be performing intensive, stormwater monitoring in this area to try to identify the sources of pollution that are impacting these waters. Since the primary pollutants of concern are microbial, alternate indicators (see below) will be used to determine if the predominant sources are human or non-human. By clearly identifying the sources, an effective management plan can be developed to improve the quality of these waters.